

Application No. 10/560,171
Amendment dated March 23, 2010
Reply to Office Action of January 5, 2010

03/31/2010
Docket No.: 09852/0203745-USO

AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121, the following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended): A cemented carbide material for a surface coated gear cutting tool which is employed in a substrate for a surface coated gear cutting tool obtained by forming a hard coated layer on a surface of said substrate,

said cemented carbide material for a surface coated gear cutting tool comprising a WC- β t-Co based cemented carbide,

wherein a content of Co forming a binder phase of said cemented carbide material for a surface coated gear cutting tool is in a range of 12 to 17 wt%,

wherein among components of a β t solid solution forming a hard phase of said cemented carbide material for a surface coated gear cutting tool, a content of components excluding WC is in a range of 15 to 20 wt%, and a total content of Ta carbonitride and Nb carbonitride is in a range of 5 to 7 wt%,

wherein said β t solid solution comprises: TiC; TiN; Ta carbonitride; and Nb carbonitride, and

wherein a Nb content D_{Nb} and a Ta content D_{Ta} in said β t solid solution satisfy a relational expression of $D_{Nb}/(D_{Nb}+D_{Ta}) \geq 0.7$. and

wherein said cemented carbide material is employed as a substrate for a surface coated gear cutting tool obtained by forming a metal carbonitride hard coat layer on a surface of said substrate.

2. (Canceled)

3. (Original): A cemented carbide material for a surface coated gear cutting tool according to claim 1, wherein a fracture toughness at room temperature is in a range of 9.5 to 13 MPa(m)^{1/2}.

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4. (Original): A surface coated gear cutting tool comprising a cemented carbide material for surface coated gear cutting tools according to claim 1.

5-8. (Canceled)